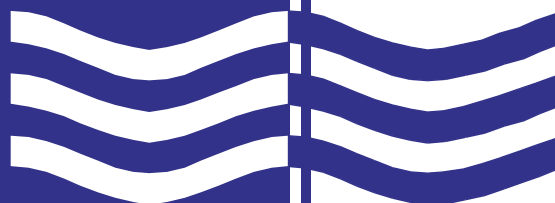


Epi Notes



North Carolina Department of Health and Human Services ♦ Division of Public Health

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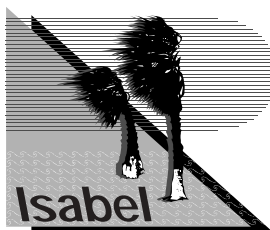
September - November 2003

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North Carolina Division of Public Health - Hurricane Isabel Public Health Rapid Needs Assessment

Prepared by James Kirkpatrick, MD, MPH, Bioterrorism Coordinator Head, Office of Public Health Preparedness and Response



In response to Hurricane Isabel, the North Carolina Division of Public Health performed a Public Health Rapid Needs Assessment in several of the most affected counties. Ten (10) teams departed Raleigh en route to their assessment areas at approximately 1:00 PM on Friday, September 19, less than 24 hours after the storm passed. The teams were based on North Carolina's seven Public Health Regional Surveillance Teams, which were established as part of the state's Bioterrorism and Public Health Preparedness Cooperative Agreement activities.

Each team of 2-3 people was equipped with a four-wheel drive vehicle, two-way radio, and maps of the initial assessment areas, which were located in Pamlico and Beaufort Counties. These counties were initially thought to have suffered the greatest impact of the hurricane through widespread inundation. The assessment teams also carried information about disaster relief and health and safety issues to the households being surveyed. A separate on-the-ground public health assessment team from Public Health Regional Surveillance Team-1, based in Greenville, assessed public health needs in Hyde County.

The Rapid Needs Assessment was designed to quickly determine immediate community health needs by gathering data from a census-based population sample. Identified households in the sample were interviewed and data used to determine the public health status and needs of the population in the affected areas. The methodology for selecting representative samples of the affected population is an established method previously used by the Centers for Disease Control and Prevention and others for post-disaster rapid needs assessments around the world.

Team members were state, local, and university-based health professionals including nurse epidemiologists, industrial hygienists, environmental health specialists, veterinarians and physicians. Several students from the UNC School of Public Health were also members of the assessment teams.

To perform the assessment, the Division of Public Health requested the technical expertise of two CDC disaster epidemiologists. The disaster epidemiologists assisted this project by providing the following types of support:

- Identification of sample populations
- Development of survey instrument(s)
- Logistics planning
- Training of assessment teams
- Data analysis, report design and generation

Data collection began late Friday afternoon, primarily in the census blocks around Washington, N.C. The remaining blocks in the survey area were completed by the end of the day on Saturday. Any immediate needs identified were forwarded to the health departments in the surveyed counties. Aggregate data was provided to counties and to state agencies for planning and response purposes.

Even as assessments in Beaufort, Pamlico and Hyde counties were being completed and provided to the health directors in those counties, it became clear that the greatest and most prolonged impacts were actually in counties farther north. Based on meteorologic data (areas where 100 mph gusts were predicted), reports of prolonged electrical outages, and direct reports from several health directors, the Public Health Command Center determined that the second phase of rapid needs assessments should take place in a 14-county area bounded by Northampton on the west, the state line on the north, Martin-Tyrell-Washington on the south, and extending to the coast. During Saturday night, while the initial information from the first three counties was being coded, the forward-based leadership of the rapid assessment project, operating out of Greenville, selected census blocks in the additional 14 counties to be surveyed on Sunday, generated maps and assigned survey areas.

Early on Sunday morning, a total of 13 two-person teams were dispatched to cover the area, administering the rapid needs assessment survey to 210 households selected by the randomization process. By the end of the day on Sunday (barely 72 hours after the storm had passed), data were available on the public health needs of a representative sample of the affected area. Reports from the assessment were provided to the health directors in the affected counties and also to the state Emergency Operations Center for inclusion with other information shaping the state's response to Hurricane Isabel.

The efforts of everyone associated with the Rapid Needs Assessment project are to be commended, but especially those of Will Service, Industrial Hygiene Consultant in the Office of Public Health Preparedness and Response, who led the project from conception, through forward-basing, to completion of the data analysis. This project clearly showed the value of the additional people, equipment and planning that have come to our state as a result of the renewed emphasis on public health preparedness and bioterrorism. The value of a capability that can respond very quickly to provide on-the-ground public health assessments is clear to all. In initial discussions with N.C. Emergency Management, the need for inclusion of rapid needs assessments in the state's emergency operations plan has been recognized. ♦

Mold: A Public Health Perspective

Prepared by Romie Herring, CIH

Industrial Hygienist Consultant

Occupational and Environmental Epidemiology Branch



Mold growth in the environment is not a new occurrence. Mold in the environment comprises 25 percent of the earth's biomass, with more than 100,000 species. Mold growth in homes is mentioned in the literature approximately 3,400 years ago. When mold growth occurs inside buildings, there are concerns with respect to potential human exposure and adverse health effects. The North Carolina Division of Public Health's (NCDPH) position is that mold should not be growing in the indoor environment. If mold is found growing indoors, it should be removed and the environmental conditions modified to prevent re-growth. A mold evaluation is needed to determine if mold is growing indoors, the extent of the growth, and the cause of the growth. Factors to be considered in performing a risk assessment are inspection for mold growth, mold reservoirs, and pathways for exposure. Air sampling is not generally recommended as part of such an investigation.

Assessing the health risk from mold growth in the indoor environment is difficult. Currently there is not a consensus on a quantitative standard to define what level of mold exposure is acceptable. The NCDPH's position is that exposure to all indoor molds should be minimized.

From a human health effect perspective, airborne mold products may cause symptoms among sensitized individuals such as rhinitis (sneezing), eye irritation, asthma symptoms (wheezing or coughing), and dyspnea (difficulty breathing). Sensitization to mold may occur in approximately 10% of the population. Some species of mold may cause infectious respiratory disease and others can generate toxins that may cause illness.

(continued on page 5)

Upcoming Bioterrorism Exercises

Prepared by James Kirkpatrick, MD, MPH

Bioterrorism Coordinator

Head, Office of Public Health Preparedness and Response



Applied Marine Technology, Inc. (AMTI) of Virginia Beach, Va. has been selected as the contractor for North Carolina's three-phased state-wide BT exercise. A series of meetings have already taken place with the

contractor to flesh out the exercise plans. Dates for each phase have now been established, selected to maximize the ability of local health departments to participate or observe.

The state's overarching objectives are to involve many levels of government and organizations, to exercise with maximum realism, and to identify weaknesses in our planning, training or organization for bioterrorism response. The contractor's role is to develop the detailed scenario (known in the exercise trade as a Master Scenario Event List or "MESL"), provide observers/controllers, conduct the exercise, and provide both oral and written after-action reviews.

During the exercise, each participating organization will maintain its own command and control and may establish its own exercise objectives, using the message traffic and information flows from the MESL to drive activities suited to the participating organizations' needs. The hours of operation for the exercise are normal duty hours unless a participating organization chooses to exercise itself after normal hours. The exercise is primarily a "scripted" one rather than a true "free play" exercise.

The simulation or exercise play represents one continuous event with pauses between each phase. Each phase of the exercise was designed to exercise a particular aspect or component of our overall bioterrorism plan and capabilities. Phase I, Surveillance and Disease Investigation occurred October 22-24. The intention in this phase is to take our state from a "standing start", i.e., with no advance warning of an impending attack. We moved through the steps of surveillance and disease investigation, up to the point at which we would request delivery of a "push package" of pharmaceuticals and other material from the Centers for Disease Control and Prevention's Strategic National Stockpile. In addition to surveillance and disease investigation, play also involved mass care (medical logistics), public information, and command/control/communications. One of the exciting aspects of the scenario was a series of videotaped "injects" at suitable moments in the play. These simulated the kinds of press interviews and other public information events that would occur during an actual event of this nature.

Phase II, involving the Strategic National Stockpile's Technical Assistance and Response Unit (TARU) and the Training, Education and Demonstration (TED) package of the SNS, will be November 12-14. The TED, a package of simulated medical material in the same containers and packing materials as a real push package, will be delivered to our Reception and Staging Site in Raleigh. Subsequent play will require the state to break down the package, initiate inventory procedures, distribute material to secondary distribution sites and, through them to dispensing sites. At nine separate locations throughout the state, dispensing sites will be set up to exercise the details of dispensing simulated medications (inert) to the public.

The final phase, quarantine/isolation, will occur December 10-12. In this phase, persons who have had contact of the disease will be identified through disease investigation and, after receiving prophylactic medications, will be placed in quarantine. There will be no actual people placed in quarantine. However, the challenges of identification, routing to a dispensing site, delivery of a legally-binding quarantine order, and maintaining people in quarantine will all be challenges for the state health department and several local health departments to face. The final step of phase III will be to release people from quarantine as they complete their stay. Participating local health departments, Public Health Regional Surveillance Teams, and Metropolitan Medical Response Systems have been contacted and their contact information provided to the contractor. There is a limit to the number of separate sites that can participate in the exercise owing to the contractor's ability to cover them within the contract. However, local health departments, hospitals and several other state agencies will be able to follow the action through the N.C. Health Alert Network and will receive summaries of the days' actions. Each phase of the exercise will conclude with an oral after-action review that will be conducted over a PHTIN hookup so that observers from across the state can benefit from the lessons learned. In addition, a written after-action report is included in the contract and will be made available to interested parties in public health across the state once completed.

(As a small, early part of the learning we anticipate from this exercise, see if you, the reader, can identify the biological agent we are going to use in the exercise. It is one that affects both humans and animals, has a short incubation period, is communicable from person-to-person, is treatable, and can be prevented with post-exposure antibiotic prophylaxis. Think you know what it is? Tune in to one of our after-action reviews to find out!) ♦

Clandestine Methamphetamine Laboratories

Prepared by Sherry R. Giles, MPH, Occupational & Environmental Epidemiology/Hazardous Substances Emergency Events Surveillance Program (HSEES)

Supported by Grant/Cooperative Agreement Number 486399 from the Agency for Toxic Substances & Disease Registry

General Methamphetamine Information

Amphetamine generically refers to any member of a class of drugs that have an amphetamine base. Methamphetamine is a stimulant that can be snorted, smoked, taken orally or injected. Methamphetamine is the most common illicit amphetamine. It is also the most commonly synthesized controlled substance. Street names for methamphetamine include: batu, black beauties, chalk, copilots, crack meth, crank, cristy, crystal, dexies, drivers, glass, go, go fast, hanyak, Hawaiian salt, hearts, hiropon, ice, kaksonjae, L.A. turn-arounds, leapers, meth, pep pills, quartz, shabu, speed, thrusters, ups, uppers, wake ups, wire, zip. Clandestine methamphetamine laboratories account for more than 90% of all illegal drug seizures in recent years in the United States.

In 2001 there were 34 methamphetamine labs discovered in North Carolina; from January through August 2003 there have been more than 100 labs discovered. These labs pose multiple dangers to both public health and the environment. Methamphetamine labs can be located almost anywhere. Common lab locations include inside vehicles, motor homes, neighborhood homes, rental storage units and motel rooms. Most labs in North Carolina have been found in private residences. Some of these homes have small children living in them, and exposures to the chemicals have caused respiratory symptoms in the children. Several lab busts have required neighborhoods to be evacuated due to the dangers associated with the labs.

Making methamphetamine requires minimal training and a limited amount of equipment and chemicals that are relatively inexpensive. The various chemicals used are listed in Table One. For every pound of drug produced there are 5 – 6 pounds of toxic waste left over. Methamphetamine site clean-up can cost up to \$150,000.

There are two primary ways methamphetamine is manufactured in North Carolina. The red phosphorus (“Red P”) method is most common in the western part of the state. This method is the reduction of ephedrine with hydriodic acid and red phosphorus. These labs have the following unique dangers: phosphine gas production, fire from the conversion of red phosphorus to white phosphorus, the use of acid gas generators, exothermic/incompatible reactions of red phosphorus, creation of acutely corrosive and toxic atmospheres, creation of flammable and explosive atmospheres, and creation of oxygen-deficient atmospheres. The ammonia method,

also known as the “Nazi” method or “sodium metal” method, is predominant in the eastern part of the state. This method uses lithium metal and anhydrous ammonia in the reduction of ephedrine. These labs also come with a unique set of dangers: electroplating sodium metal from molten sodium hydroxide, which may cause skin or lung irritation; a flammability and irritant toxicity hazard from concentrated ammonia atmospheres; the violent reaction of water with sodium or lithium metals; a flammable, explosive atmosphere; caused by the acutely reactive metals used.

Table One

Common Chemicals Used in Methamphetamine Manufacturing

Acetaldehyde	Lead acetate
Acetic acid	Lithium aluminum hydride
Acetic anhydride	Magnesium
Acetone	Mercuric chloride
Allyl chloride	Methanol
Allylbenzene	Methylamine
Aluminum	Monomethylamine
Ammonia	N-Methylformamide
Ammonium acetate	Nitroethane
Ammonium formate	Norpseudoephedrine
Ammonium hydroxide	Palladium
Benzaldehyde	Phenyl-2-propanone
Benzene	Phenylacetic acid
Benzyl chloride	Phenylpropanolamine
Chloroform	Phosphoric acid
Ephedrine	Propiophenone
Ethyl ether	Raney nickel
Formamide	Red phosphorus
Freon	Sodium
Hexane	Sodium carbonate
Hydriodic acid	Sodium cyanide
Hydrochloric acid	Sodium hydroxide
Iodine	Thionyl chloride
Isopropanol	Toluene

Physical Hazards of Clandestine Methamphetamine Labs

- Dangerous suspects, armed or under the influence of illicit drugs
- Defensive systems
- Explosive devices
- Unsafe electrical devices
- Mechanical & electrical security devices
- Animals

Chemical Hazards of Clandestine Methamphetamine Labs

- Unidentified chemicals that may be flammable/com-bustible, reactive, corrosive or toxic
- Any/all DOT Hazard Classes of Chemicals

(continued on page 5)

(Clandestine Methamphetamine Labs, continued from page 4)

- Improvised/incompatible lab equipment
- Incompatible storage locations and chemical arrangements
- Containers incompatible with contents
- Improper handling practices

Environmental Hazards of Clandestine Methamphetamine Labs

- Potential for fire or explosions
- Toxic air emissions
- Soil and water contamination
- Hazardous waste accumulations
- Structures and vehicles with irreversible damage and contamination

Adverse Health Effects from Methamphetamine Chemical Exposure

Acute exposure to high levels of methamphetamine lab chemicals may cause shortness of breath, coughing, chest pain, dizziness, lack of coordination, tissue irritation, and burns of the skin, eyes, nose, and mouth. Death could result from acute exposure. Acute exposure to lower levels of methamphetamine lab chemicals may cause the following symptoms: headache, nausea, dizziness, and fatigue. Corrosive substances found in methamphetamine labs irritate mucous membranes and the respiratory system and can cause skin burns if they are inhaled or come in contact with the skin. Solvents found in methamphetamine labs can irritate the skin, mucous membranes, and respiratory tract and may cause adverse central nervous system effects.

Injury Prevention

Only trained personnel wearing appropriate personal protective equipment should enter a methamphetamine lab until the area has been ventilated and decontaminated. Level B protection is recommended for assessment and Level C for decontamination of methamphetamine labs. The lab should be ventilated immediately and continually and limit your time in the lab area. Do not touch, smell, or open lab materials or equipment.

Occupational Epidemiology Involvement

The Occupational Environmental Epidemiology (OEE) Branch has been working to address concerns associated with former methamphetamine labs. The State Bureau of Investigation issues a letter to property owners and the local health departments when a lab is seized. This letter serves as a warning that there may be hazardous substances and waste products left at the property. OEE is working to establish guidelines for decontamination and re-occupancy of these properties to ensure the protection of public health. Staff will also be participating in Attorney General's one-day summit in October. The summit will focus on enhancing

responses in the areas of (1) awareness and detection; (2) intervention; and (3) enforcement. The input from this summit will be incorporated in a report published by the Attorney General's office.

Sources

- http://www2.state.id.us/dhw/BEHS/meth_gen_info.htm
- http://www.kci.org/meth_info/links.htm
- <http://www.health.state.mn.us/divs/eh/meth/index.html>
- <http://www.makesmartchoices.org/methlabs.htm>



(Mold: A Public Health Perspective, continued from page 2)

Certain individuals, such as asthmatics, infants/children, elderly, immune compromised patients, and persons with existing respiratory conditions, are at highest risk of health effects from exposure to mold.

Mold grows where sufficient moisture is present. Mold spores are present throughout the indoor and outdoor environments. When environmental conditions are favorable, deposited mold spores can germinate into active mold growth. Several conditions must be met for mold to grow in the indoor environment. These conditions are appropriate temperature, food sources (i.e., organic materials such as dust/debris), moisture/high humidity, and contact time. All but excessive moisture is always present. Therefore, if mold growth is to be eliminated or controlled, moisture control is imperative. Moisture sources can be plumbing leaks, water leaks through roof or walls, flooding, and condensation on building parts from elevated humidity levels. Relative humidity levels should be kept under 60%.

To decrease the risk from mold, proper clean-up or remediation of mold growth is important. The steps necessary for cleaning are often dictated by the size of contamination and what the mold is growing on. In all cases protection of the building, building occupants, and the person removing the mold must be considered. Porous materials most often should be discarded. Semi-porous materials can often be cleaned, dried, and reused. Non-porous material can usually be cleaned. Cleaning should be done with a detergent. Some people choose to use a disinfectant; however, disinfectants may have exposure concerns themselves for people and care must be taken when using them.

Visit the Indoor Air Quality (IAQ) website at <http://www.schs.state.nc.us/epi/oii/mold/> for more information on mold. For more IAQ information visit <http://www.schs.state.nc.us/epi/air.html>. After reviewing these sites, you can contact staff at the Occupational and Environmental Epidemiology Branch at (919) 733-3410 for discussions about a specific situation. ❖

Newborn Screening/Clinical Chemistry Program Update at NCSLPH

*Prepared by Dr. Leslie Wolf, Assistant Lab Director
and the Newborn Screening Staff
North Carolina State Laboratory of Public Health*

On August 15, 2003, Dr. Shu Chaing, Pat Phillips, Susan Weavil, Ann Grush, and Gail Carrington provided an excellent program update via the Public Health Information and Training Network (PHTIN) for the entire state. Proper procedures for collecting blood and for submitting specimens were reviewed, and an overview of certain metabolic disorders was provided. Explanations regarding acceptable and unsatisfactory specimens for dried blood spots and whole blood specimens should prove helpful in lowering the rate of rejected submissions. Step-by-step instructions are provided on the laboratory requisition forms, at the website <http://slph.state.nc.us/>, or by consulting SCOPE (A Guide to Services at NCSLPH).

The Newborn Screening Laboratories at NCSLPH provide screening for all babies born in North Carolina. A two-year pilot study was performed for the new methodology, known as tandem mass spectrometry (MS/MS), from 1997 to 1999. Since April 1999, when MS/MS screening was instituted at NCSLPH, all newborns have been screened for over 30 metabolic disorders. While the general public is most familiar with disorders such as phenylketonuria (PKU), sickle cell disease, primary hypothyroidism and galactosemia, there are other devastating disorders that occur with greater or equal frequency than PKU. These include congenital adrenal hyperplasia (CAH) and Medium-chain acyl-CoA dehydrogenase deficiency (MCADD). Due to an enzyme deficiency, CAH has two forms. One form is salt-wasting, in which the infant may die from abnormal electrolyte levels, while the other form is simple virilizing, in which an infant may exhibit both male and female genitalia. MCADD is a fatty acid oxidation disorder. Incidence of this rare disorder prompted the adoption of MS/MS as a new method at NCSLPH.

Because of the excellent screening program available in North Carolina, many common and rare disorders have been detected. In most cases, early detection of these metabolic disorders leads to early diagnosis and treatment that prevent learning disabilities, severe brain damage or even death. A July 2003 *Durham Herald Sun* article ("Drop of Prevention" by Jim Shamp) described the success of this program for one local family. Table 1 below lists some of the many disorders detected by screening 574,672 newborns at NCSLPH from April 20, 1999 through July 15, 2003. For

further information, please call (919) 733-3937 and ask for one of the following experts:

Dr. Shu Chaing, Unit Supervisor, Newborn Screening/Clinical Chemistry
Susan Weavil, MS/MS Supervisor
Ann Grush, Thyroid/Galactosemia Supervisor
Gail Carrington, Hemoglobinopathies Supervisor
Pat Phillips, Data Processing Supervisor

Disorder	Number Detected	Incidence in NC
Hemoglobinopathy	433	1:1327
Primary Hypothyroidism	144	1:3991
Medium chain acyl-CoA dehydrogenase deficiency (MCADD)	40	1:14,367
Congenital Adrenal Hyperplasia (CAH)	24	1:23,945
Galactosemia	18	1:31,926
Phenylketonuria (PKU)	18	1:31,926
Hyperphenylalaninemia (HPA)	16	1:35,917
3-Methylcrotonyl-CoA carboxylase deficiency (3-MCC)	13	1:44,205
Short chain acyl-CoA dehydrogenase deficiency (SCADD)	7	1:82,096
Very long chain acyl-CoA dehydrogenase deficiency (VLCADD)	6	1:95,778
Isovaleric academia (IVA)	6	1:95,778
Methylmalonic aciduria (MMA)	4	1:143,668
Citrullinemia	3	1:191,557
Glutaric academia I	3	1:191,557



HIV Outbreak Among Young Adults

Prepared by Judy Owen-O'Dowd, Special Projects and Policy Coordinator, HIV/STD Prevention & Care Branch



North Carolina has recently identified a previously unrecognized HIV epidemic in young adults, many of whom are attending college. The outbreak was found as a result of North Carolina's STAT (Screening Tracing Active Transmission) HIV testing program. In early 2002, two newly-positive HIV male college students were identified by the STAT project, triggering a retrospective review of HIV case reports in the Triangle. The review of state HIV case reports revealed 25 new cases of HIV infection in males attending college in the Triangle (Wake, Durham and Orange counties) between January 1, 2001 and March 1, 2003. At the same time there were 121 cases of newly diagnosed HIV infection in males of the same age in the Triangle that were not in college. During 2000, only three cases of HIV were reported in males who were in college in the Triangle; the data show an increase of 83% in only two years.

The 25 newly diagnosed HIV was found in young adults who were attending 12 different colleges in the Triangle. A sexual partner network investigation linked eight of the colleges together. It is possible that these college cases were found because college students may have more access to counseling and testing facilities.

After finding high incidence in this relatively small sample, an expanded review of state HIV surveillance records was conducted to include a total of 38 N.C. counties during the same time period. Fifty-six cases of newly diagnosed HIV were identified in males who were attending 30 colleges/universities throughout the state along with 307 cases in males who were not attending colleges. Although these cases were among college students, all young people are at risk. Data show that between 40% and 50% of new HIV infections in North Carolina occur in young people.

The newly diagnosed HIV-infected college males were compared to newly diagnosed HIV-infected males who were not enrolled in college. Examination of potential sexual partners and social/sexual network links was performed through manual review of all disease intervention specialists (DIS) interview records, as well as counseling and testing site (CTS) data about case patients diagnosed with HIV infection and their contacts in the study period. We found that college students with newly-diagnosed HIV infection were more likely than non-college students to visit gay bars or dance clubs, use Ecstasy/club drugs or meet partners over the Internet. These data suggest that use of the Internet as a way to meet sexual partners is not uncommon in HIV-infected college-

age gay men. All five college students who reported using the Internet to meet sex partners had a diagnosis of HIV after July 2001. Previous research has found that Internet sex-seekers were more likely to be men having sex with men (MSM) to report higher rates of high-risk sexual behaviors, more previous STDs and more sexual partners. This is the first study to identify and associate the use of club drugs with HIV infection in black MSM.

Many steps were taken as a result of the outbreak. All local health department personnel, all of the campuses, and local community-based organizations (CBOs) were notified of the outbreak findings, and counseling and testing activities on campuses were expanded. Many of the Triangle colleges and universities are working to increase student awareness of HIV. Activities include preparing special materials for fall orientation, holding events to increase HIV awareness, initiating peer education training, and writing articles for the student newspaper.

In addition, the Centers for Disease Control and Prevention (CDC) has sent an Epi-Aid team of five HIV prevention experts to North Carolina. The Epi-Aid staff is assisting UNC and the N.C. Division of Public Health, local health departments, CBOs and the universities to devise effective prevention interventions. Interventions to target the young African American bisexuals and MSMs will be developed and implemented in existing CBOs and other venues to promote behavior change to prevent infection with HIV and other STDs.

Contact Judy Owen-O'Dowd with questions at 919-733-9553 or email her at judy.owen.odowd@ncmail.net. ♦

Save the Date !!!

***Annual
State Health Director's
Conference***

**January 29-30, 2004
Crabtree Marriott
Raleigh, North Carolina**

Project Commit to Prevent... **Making the Connection Between Prevention and Academia**

*Prepared by Phyllis Gray, Special Projects Coordinator
HIV/STD Prevention and Care Branch*

Many sexually transmitted diseases (STDs), including HIV, have had a disparate impact on communities of color in North Carolina. The relative incidence of HIV alone has increased so dramatically through the 1990s among African Americans and American Indians that the public health system has defined HIV/AIDS as a "crisis". A closer look at the statistics reveal that, when compared to white-non Hispanic North Carolinians, African Americans have a rate of HIV disease that is almost 11 times higher (66.5: 6.3). For American Indians, the rate of HIV disease is almost three times higher (17.8: 6.3). Of particular concern is the impact of HIV and STDs on young adult African Americans and American Indians.

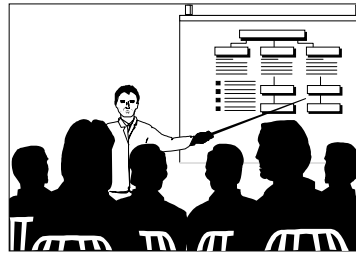
In keeping with the North Carolina Department of Health and Human Services, mission to eliminate health disparities for racial and ethnic minorities, the Division of Public Health-HIV/STD Prevention and Care Branch has developed a new initiative – *Project Commit to Prevent*. This project has as its overall goal to empower college/university students, with special emphasis on the over 43,000 primarily African American and American Indian students enrolled in North Carolina's historically minority colleges, to change behaviors that put them at risk for HIV and STD infections.

To achieve this end, the N.C. HIV/STD Prevention and Care Branch has partnered with North Carolina's twelve historically minority colleges/universities to help each institution: (1) expand HIV/STD prevention/risk reduction educational programs on campus; (2) enhance the capacity of the health services on each campus to provide HIV/STD risk reduction services; and (3) strengthen linkages between each institution and other HIV/STD service providers near the campus.

For the next year, the Branch will work to develop each campus as an officially recognized HIV Counseling and Testing site, thus allowing each institution to include HIV testing on their inventory of general services available through student health. Other HIV service providers near each campus, including local health departments, will work collaboratively with faculty and students to ensure that there are a wide variety of HIV prevention activities on each campus. ♦

LaCrosse Encephalitis Conference in Asheville, North Carolina

*Prepared by Jeffrey Engel, M.D., Head
General Communicable Disease Control Branch
State Epidemiologist*



On June 20, 2003, North Carolina and Tennessee co-hosted a continuing medical education conference entitled "LaCrosse Encephalitis: The North Carolina and Tennessee Experience". The program

was organized and provided by Mountain Area Health Education Center (AHEC) in Asheville. Funding of the conference was made possible through the Epidemiology and Laboratory Capacity grant from the Centers for Disease Control and Prevention (CDC). Dr. Timothy Jones, Deputy State Epidemiologist from the Tennessee Department of Health and Dr. Jeff Engel, State Epidemiologist from North Carolina Department of Health and Human Services, were the conference directors.

The purpose of the conference was to increase local awareness of this mosquito-borne infection endemic to the mountain region of North Carolina and Tennessee. Surveillance data from the past three years indicates an increasing incidence of disease in North Carolina (graph, page 10). LaCrosse is an arbovirus infection similar to West Nile and Eastern Equine that can cause severe brain inflammation. The disease is caused by a Bunyavirus that normally infects small rodents and is carried by the tree hole mosquito, native to the wooded environment of the mountains. LaCrosse primarily affects children under the age of 15 and is characterized by the sudden onset of fever, headache, confusion, and stiff neck, often followed by seizures.

Dr. Roger Nasci, research entomologist from the Arboviruses Disease Branch of the CDC at Fort Collins, Colorado, highlighted the morning session of the conference. He provided an overview of LaCrosse and other arboviruses from the national perspective. Dr. Jones and Dr. Jean-Marie Maillard (N.C. General Communicable Disease Control) summarized the epidemiology from Tennessee and North Carolina. Dr. Leon DeJournett, pediatric intensivist, and Dr. David McClain, pediatric infectious disease specialist (both in Asheville), discussed the clinical management and medical virology of LaCrosse.

(continued on page 10)

Reported Communicable Disease Cases, N.C., January-September 2003 (by date of report)*

Disease	Year-to-Date (Third Quarter)			3 rd Quarter 2003	Comments / Notes
	2003	2002	Mean (98-2002)		
Campylobacter	600	496	410	325	
Chlamydia, laboratory reports	19247	18409	16867	6216	
Creutzfeldt-Jakob disease	1	-	-	1	Note 9
Cryptosporidiosis	34	28	-	19	Note 1 & 2
Cyclosporiasis	2	0	-	1	Note 1 & 2
E. coli, Shiga toxin-producing	25	36	48	14	Note 3 & 9
Ehrlichiosis, Monocytic	16	7	-	11	Note 1 & 2
Encephalitis, California group	12	12	-	7	Note 1 & 4
Encephalitis, Eastern Equine	1	0	-	1	
Encephalitis, West Nile Virus	3	0	-	3	
Foodborne, other	33	29	13	12	
Foodborne, staphylococcal	4	62	25	3	
Gonorrhea	11063	12029	13430	3643	
Haemophilus influenzae	35	30	28	20	
Hepatitis A	72	182	134	39	
Hepatitis B, acute	111	174	175	15	
Hepatitis B, chronic	800	710	537	304	
Hepatitis C, acute	11	22	-	6	Note 1 & 4
HIV/AIDS	1646	1256	1183	519	Note 5
Legionellosis	30	9	10	14	
Listeriosis	15	5	-	5	Note 8
Lyme disease	77	101	56	57	
Malaria	19	19	20	11	
Meningococcal disease	30	29	41	11	
Meningitis, pneumococcal	22	34	39	11	
Q Fever	1	2	1	1	
Rabies, animal	601	551	545	214	
Rocky Mountain Spotted Fever	172	226	114	112	
Salmonellosis	959	1042	923	476	
Shigellosis	815	278	224	366	
Strepto. A, invasive	92	107	-	26	Note 2
Syphilis, total	319	488	854	72	Note 6
Tuberculosis	235	242	278	92	
Toxic Shock Syndrome	1	3	3	1	
Typhoid, Acute	7	1	2	2	
Vaccinia	4	-	-	3	Note 9
Vanco. Resistant Enterococci	443	430	-	182	Note 2
Vibrio, other	4	7	-	1	Note 2
Vibrio vulnificus	5	2	3	4	
Whooping cough	99	36	69	28	

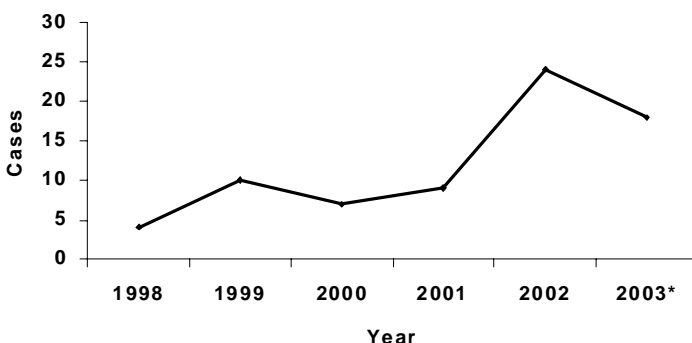
* Preliminary data, as of 10/14/2003. Quarters are defined as 13-week periods. Only diseases with cases reported in the third quarter of 2003 are listed in this table.

Notes: 1. Not reportable in this entire time period; 2. Became reportable 8/1/1998; 3. E. coli O157:H7 became reportable 10/1/1994; 4. Became reportable as such 8/1/1998; previously within other category ("Encephalitis" and "Hepatitis, non A-non B"); 5. Earliest report with HIV infection or AIDS diagnosis; 6. Primary, secondary and early latent syphilis; 7. Became reportable 7/1/1997; 8. Became reportable 7/2001; 9. Became reportable as of 2/15/2003; and E. coli, Shiga toxin-producing replaces E. coli O157:H7.

Todd McPherson, head of the Virology and Serology Unit of the State Laboratory for Public Health, led off the afternoon session discussing the laboratory aspects of diagnosis. J. Todd Utz, a graduate student of Dr. Charles Apperson, Professor of Entomology at N.C. State University, presented data on their study of the social and economic impact of LaCrosse encephalitis. Dr. Bruce Harrison and Dr. Nolan Newton from the N.C. Department of Environment and Natural Resources ended the conference with reviews on the transmission cycle of LaCrosse virus and community guidelines for control of LaCrosse encephalitis.

Irene Jurczyk, co-director of Mountain AHEC, commented on the success of the conference. Over 70 people attended the conference both on-site in Asheville and through live satellite telecasts at regional hospitals and health departments. ♦

LaCrosse Encephalitis Reported Cases North Carolina, 1998-2003



*reported as of Oct. 3

CDC Cooperative Agreement Award

Prepared by James Kirkpatrick, MD, MPH

Bioterrorism Coordinator

Head, Office of Public Health Preparedness and Response

North Carolina has received its Notification of Grant Award for Year Four of the CDC Bioterrorism Grant, more properly known as Cooperative Agreement U990/CCU416979-04, Public Health Preparedness and Response for Bioterrorism. Under the leadership of the Principal Investigator, Dr. Steve Cline, a team made up of people from the Epidemiology Section, the Division of Public Health, and two local health directors completed the state's application at the end of June 2003. Funds in this grant, totaling \$26,281,701 in financial and direct assistance, cover activities from August 31, 2003 through August 30, 2004. Within the grant, a series of Critical Capacities, Critical Benchmarks, recipient activities and Enhanced Capacities are specified. Detailed progress reports and work plans for each focus area of the grant, as well as detailed budgets, were submitted using a novel on-line system that provided secure, immediate input to the granting agency.

Focus Area A (Planning and Assessment) includes \$2.7 million for a statewide mental health capacity assessment, new positions in the Injury and Violence Prevention Branch, support for the State Bureau of Investigation's clandestine drug laboratory control activities, contract services through the UNC Injury Prevention Research Center, emergency power for the Public Health Command Center, and a local and state Public Health Performance Assessment. Within A, \$0.5 million in aid to county funds is provided to support exercise participation by local health departments. In addition, \$1.8 million is available for Strategic National Stockpile activities including statewide and local exercises, planning support, upgrades to the stockpile reception sites and the addition of pharmacists to the Public Health Regional Surveillance Teams (PHRST) in three locations in the state. These were chosen to match the delivery points in our Strategic National Stockpile Plan.

Focus Area B (Surveillance and Epidemiologic Capacity) is funded at \$9.9 million and includes continued operations of the seven PHRSTs that cover the state, the addition of 12 hospital-based public health epidemiologists in the largest hospitals, contracts for several surveillance systems to enhance our early detection of outbreaks or attacks, and a \$4.0 million fund for direct aid to counties to enhance their epidemiologic capacities.

(continued on page 11)

Laboratory identification of biologic agents, Focus Area C, was funded at \$2.6 million. Highlights in this area include equipping two Bio-Safety Level-3 laboratories and the continued operation and equipping of three regional bioterrorism laboratories in Buncombe, Mecklenburg and Pitt counties.

Focus Area D (Laboratory-chemical Agents) is a new one for our state, initially funded at \$0.5 million for the hiring of personnel and the purchase of several very sensitive testing devices for low levels of chemical agents.

In Focus Area E (Health Alert Network and Information Technology), \$5.3 million has been directed at projects including the continued development of the N.C. Health Alert Network into a complete electronic disease surveillance system. This focus area also provides broadband Internet access for all local health departments and specific kinds of programming support to other areas in public health.

Risk Communications (Focus Area F) received \$0.9 million for projects as diverse as printing and distributing a state-wide newspaper insert on public health preparedness, assessing the media's and public's awareness of bioterrorism risks, and enhancing the radio communications systems in the Public Health Command center. Aid-to-county funds are also included in this focus area to support risk communications activities in the local health departments.

Focus Area G (Training) includes projects and activities totaling \$2.1 million. Among these are continued development of the Public Health Workforce Development System, further curriculum development with the N.C. Community College System, a wide variety of training for public health and mental health personnel, and aid-to-county funds to support local and regional table-top training exercises across the state.

This sizable grant from the federal government will greatly advance the state of readiness of North Carolina for dealing with all kinds of public health emergencies, both natural and man-made. And when this grant is combined with funds from the Health Resources and Services Administration (HRSA) and the Office of Domestic Preparedness (ODP), North Carolina has new federal resources totaling \$90.3 million to assist in preparedness and response. ♦

Employee Recognition: Employee of the Quarter William Service

*Prepared by Patsy P. West, Administrative Assistant
Epidemiology Section*



Will Service has received the Epidemiology Section's Employee Recognition Award for the third quarter of 2003. Mr. Service was nominated in the category of Service Excellence.

A career state employee who began state employment in May, 1980, Mr. Service is the industrial hygiene consultant in the Office of Public Health Preparedness and Response (PHP&R). An integral member of the PHP&R, he has the unique responsibility for anticipation, recognition, evaluation and control of environmental hazards to human health in the event of a bioterrorism attack or any natural disaster. He is also responsible for exposure characterization in disease outbreak investigations. He works closely with the industrial hygiene consultants in the seven Public Health Regional Surveillance Teams (PHRST) by assuring consistency between the regions, funneling information to the regions, and facilitating communication among the regional industrial hygiene consultants. Mr. Service is also responsible for the assessment of environmental preparedness, coordination of environmental data gathering, and coordination of environmental decontamination efforts. In this role, Mr. Service provides training to environmental health staff, hazardous materials (hazmat) teams, utility operators (including energy and water supply), manufacturers and others. Prior to joining PHP&R, Mr. Service was an industrial hygiene consultant with the Section's Occupational and Environmental Epidemiology Branch.

During the recent state emergency caused by Hurricane Isabel, Mr. Service headed up a very successful effort to conduct Rapid Needs Assessments in the areas of North Carolina most affected by the storm. He organized the assessment teams using assets from all seven of the PHRSTs, as well as people and vehicles from several other divisions and departments, and deployed them into the affected areas within hours after the hurricane had passed. His leadership in Raleigh and from the forward-operating base in Greenville was invaluable in rapidly assessing the impacts of the storm, especially to the public's health, and in shaping the relief efforts of all state and other agencies.

In addition to receiving the award, Mr. Service will be presented with a gift certificate to a local restaurant from the Epidemiology Section Management Team. ♦

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